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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,893	12/22/2003	Ali Yahiaoui	18459	2176

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EXAMINER
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TUROC, DAVID P

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/743,893

Applicant(s)

YAHIAOUI ET AL.

Examiner

David Turocy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 5/12/2005
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/19/04, 3/25/05, 3/25/05</u>   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 1-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without arguments to the contrary and is therefore elected **without** traverse in the reply filed on 5/12/2004.

### *Specification*

2. The disclosure is objected to because of the following informalities:

Please amend the first paragraph of the specification to update the status of the related application.

3. There appears to be a typographical error, page 12, line 8, and "surfacantat", instead of surfactant. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Appropriate correction is required.

4. The attempt to incorporate subject matter into this application by reference to a related case is improper because there is no recitation that the application is commonly assigned. Reliance on a commonly assigned copending application by a different

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inventor may ordinarily be made for the purpose of completing the disclosure. See *In re Fried*, 329 F.2d 323, 141 USPQ 27, (CCPA 1964), and *General Electric Co. v. Brenner*, 407 F.2d 1258, 159 USPQ 335 (D.C. Cir 1968).

### ***Claim Objections***

5. Claims 25 and 26 are objected to because of the following informalities: Claims 25 and 26 are dependant on the non-elected claim 14, however they should more appropriately be dependant on claim 15. Appropriate correction is required.

### ***Double Patenting***

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 15 and 16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 of U.S. Patent No. 6727196 in view of US Patent 4581254 by Cunningham et al. Claims 1-2 of

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US Patent No. 6727196 teaches applying a surfactant to a porous substrate, inherently having a first surface and a second surface. US Patent No. 6727196 fails to teach of supplying the surfactant to the first surface so that a lesser amount contacts the second surface. However, US Patent 4581254 by Cunningham et al. discloses a known technique for depositing a surfactant mixture on a surface includes depositing more material on the first surface then the second surface, therefore inherently resulting in more surfactant mixture adhering to the surface (Figures, Column 6). Therefore it would have been obvious to modify U.S. Patent No. 6727196 to apply the surfactant mixture onto one surface of the porous material as taught by US Patent 4581254 with the reasonable expectation of successfully treating the substrate with surfactant.

8. Claims 15 -17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 of U.S. Patent No. 6767508 in view of US Patent 4581254 by Cunningham et al. Claims 1-2 of US Patent No. 6767508 teaches applying a surfactant to a porous substrate, inherently having a first surface and a second surface. US Patent No. 6767508 fails to teach of supplying the surfactant to the first surface so that a lesser amount contacts the second surface. However, US Patent 4581254 by Cunningham et al. discloses a known technique for depositing a surfactant mixture on a surface includes depositing more material on the first surface then the second surface, therefore inherently resulting in more surfactant mixture adhering to the surface (Figures, Column 6). Therefore it would have been obvious to modify U.S. Patent No. 6767508 to apply the surfactant mixture onto one

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surface of the porous material as taught by US Patent 4581254 with the reasonable expectation of successfully treating the substrate with surfactant.

9. Claims 15, 16, and 19-21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2, 11-13, 17, and 26 of U.S. Patent No. 6506394 in view of US Patent 4581254 by Cunningham et al. Claims 1-2, 11-13, 17, and 26 of US Patent No. 6506394 teaches applying a surfactant to a porous substrate, inherently having a first surface and a second surface. US Patent No. 6506394 fails to teach of supplying the surfactant to the first surface so that a lesser amount contacts the second surface. However, US Patent 4581254 by Cunningham et al. discloses a known technique for depositing a surfactant mixture on a surface includes depositing more material on the first surface than the second surface, therefore inherently resulting in more surfactant mixture adhering to the surface (Figures, Column 6). Therefore it would have been obvious to modify U.S. Patent No. 6506394 to apply the surfactant mixture onto one surface of the porous material as taught by US Patent 4581254 with the reasonable expectation of successfully treating the substrate with surfactant.

10. Claims 15, 16, and 19-21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 and 11 of U.S. Patent No. 6503524 in view of US Patent 4581254 by Cunningham et al. Claims 1-7 and 11 of US Patent No. 6503524 teaches applying a surfactant to a porous

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substrate, inherently having a first surface and a second surface. US Patent No. 6503524 fails to teach of supplying the surfactant to the first surface so that a lesser amount contacts the second surface. However, US Patent 4581254 by Cunningham et al. discloses a known technique for depositing a surfactant mixture on a surface includes depositing more material on the first surface than the second surface, therefore inherently resulting in more surfactant mixture adhering to the surface (Figures, Column 6). Therefore it would have been obvious to modify U.S. Patent No. 6503524 to apply the surfactant mixture onto one surface of the porous material as taught by US Patent 4581254 with the reasonable expectation of successfully treating the substrate with surfactant.

11. Claims 15,16, and 19-21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6626961 in view of US Patent 4581254 by Cunningham et al. Claims 1-4 of US Patent No. 6626961 teaches applying a surfactant to a porous substrate, inherently having a first surface and a second surface. US Patent No. 6626961 fails to teach of supplying the surfactant to the first surface so that a lesser amount contacts the second surface. However, US Patent 4581254 by Cunningham et al. discloses a known technique for depositing a surfactant mixture on a surface includes depositing more material on the first surface than the second surface, therefore inherently resulting in more surfactant mixture adhering to the surface (Figures, Column 6). Therefore it would have been obvious to modify U.S. Patent No. 6626961 to apply the surfactant mixture

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onto one surface of the porous material as taught by US Patent 4581254 with the reasonable expectation of successfully treating the substrate with surfactant.

12. Claims 15, 16, 19 and 21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 8, 11, and 24 of U.S. Patent No. 6497983 in view of US Patent 4581254 by Cunningham et al. Claims 1-3, 8, 11, and 24 of US Patent No. 6497983 teaches applying a surfactant to a porous substrate, inherently having a first surface and a second surface. US Patent No. 6497983 fails to teach of supplying the surfactant to the first surface so that a lesser amount contacts the second surface. However, US Patent 4581254 by Cunningham et al. discloses a known technique for depositing a surfactant mixture on a surface includes depositing more material on the first surface than the second surface, therefore inherently resulting in more surfactant mixture adhering to the surface (Figures, Column 6). Therefore it would have been obvious to modify U.S. Patent No. 6497983 to apply the surfactant mixture onto one surface of the porous material as taught by US Patent 4581254 with the reasonable expectation of successfully treating the substrate with surfactant.

13. Claims 15, 16, 19 and 21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2, 9, 10, and 14-17 of U.S. Patent No. 6017832 in view of US Patent 4581254 by Cunningham et al. Claims 1-2, 9, 10, and 14-17 of US Patent No. 6017832 teaches applying a surfactant to



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a porous substrate, inherently having a first surface and a second surface. US Patent No. 6017832 fails to teach of supplying the surfactant to the first surface so that a lesser amount contacts the second surface. However, US Patent 4581254 by Cunningham et al. discloses a known technique for depositing a surfactant mixture on a surface includes depositing more material on the first surface than the second surface, therefore inherently resulting in more surfactant mixture adhering to the surface (Figures, Column 6). Therefore it would have been obvious to modify U.S. Patent No. 6017832 to apply the surfactant mixture onto one surface of the porous material as taught by US Patent 4581254 with the reasonable expectation of successfully treating the substrate with surfactant.

14. Claims 15 and 16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 5814567 in view of US Patent 4581254 by Cunningham et al. Claims 1-4 of US Patent No. 5814567 teaches applying a surfactant to a porous substrate, inherently having a first surface and a second surface. US Patent No. 5814567 fails to teach of supplying the surfactant to the first surface so that a lesser amount contacts the second surface. However, US Patent 4581254 by Cunningham et al. discloses a known technique for depositing a surfactant mixture on a surface includes depositing more material on the first surface than the second surface, therefore inherently resulting in more surfactant mixture adhering to the surface (Figures, Column 6). Therefore it would have been obvious to modify U.S. Patent No. 5814567 to apply the surfactant mixture

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onto one surface of the porous material as taught by US Patent 4581254 with the reasonable expectation of successfully treating the substrate with surfactant.

15. Claims 15-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 31-33 and 41 of copending Application No. 10/187653 in view of US Patent 4581254 by Cunningham et al. Claims 31-33 and 41 of Application No. 10/187653 teach applying a surfactant to a porous substrate, inherently having a first surface and a second surface. Application No. 10/187653 fails to teach of supplying the surfactant to the first surface so that a lesser amount contacts the second surface. However, US Patent 4581254 by Cunningham et al. discloses a known technique for depositing a surfactant mixture on a surface includes depositing more material on the first surface than the second surface, therefore inherently resulting in more surfactant mixture adhering to the surface (Figures, Column 6). Therefore it would have been obvious to modify Application No. 10/187653 to apply the surfactant mixture onto one surface of the porous material as taught by US Patent 4581254 with the reasonable expectation of successfully treating the substrate with surfactant.

This is a provisional obviousness-type double patenting rejection.

***Claim Rejections - 35 USC § 102***

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. Claims 15-17, 19, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4581254 by Cunningham et al, hereafter Cunningham.

Cunningham discloses a method of treating a porous substrate, inherently having a first and second surface, by contacting foam comprising a surfactant to a first side of the substrate and therefore less surfactant adheres to the second surface of the substrate (Column 6, Figure 1-2). The paper surfactant solution, comprising the surfactant in water as an emulsion, dispersion, or solution, includes greater than 15% surfactant and specifically discloses 16.7 wt % in Example 5, which is within the ranges as claimed.

18. Claims 15-17 and 25-26 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4411949 by Snider et al., hereafter Snider.

Snider discloses a method of treating a porous substrate, inherently having a first and second surface, by contacting foam comprising a surfactant to a first side of

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the substrate and therefore less surfactant adheres to the second surface of the substrate (Column 10, line 10-20, Column 7, lines 50-65, Figure 1). Snider discloses drying the substrate by directing hot air at the substrate in the direction from the second surface to the first surface (Column 9, line 65 - Column 10, line 5, Figure 1).

***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

21. Claims 18, 20, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham.

Cunningham teaches all the limitations of these claims as discussed above in the 35 USC 102(b) rejection.

Claim 18: Cunningham fails to disclose using a ratio of air volume to liquid volume not greater than 30 to 1. However, Cunningham discloses the amount of liquid treating composition relative to air in an effective ratio to provide the required, uniform foam structure in the foam applicator (Column 7, lines 50-60). Therefore Cunningham discloses the volume ratio to air and liquid is a result effective variable.

Therefore it would have been obvious to one skill in the art at the time of the invention was made to determine the optimal value for the ratio of air volume to gas volume used in the process of Cunningham, through routine experimentation, to impart the foam with the desired properties of uniform foam structure in the applicator.

Claim 20: Cunningham fails to disclose using 0.5 weight percent of the solution comprising surfactant(s) relative to the weight of the porous substrate. However, Cunningham discloses controlling the amount of the foam, i.e. controlling the weight percent of the liquid solution, applied to the surface of the porous substrate to provide a uniform treatment (Column 9, lines 41-45). Therefore Cunningham discloses controlling the amount of foam applied to the substrate is within the skill of one ordinary in the art depending on the desired treatment. In addition, it is the examiners position

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that the amount of surfactant applied is a known cause effective variable. If amount of surfactant applied is too low it would result in too little surface treatment and too much surfactant would result in no added benefits increased surface treatment

Therefore it would have been obvious to one skill in the art at the time of the invention was made to determine the optimal value for the surfactant applied by controlling the amount of treating agent used in the process Cunningham, through routine experimentation, to impart the substrate with the desired properties associated with the surfactant.

Claims 22-24: Cunningham discloses providing a porous substrate in a first direction, bending the substrate into a second direction to define a wrap angle, where the surfactant(s) are applied to the first surface at about the point the substrate bends into the second direction, however, they fail to explicitly disclose a wrap angle with the ranges as claimed. However, Cunningham discloses providing a wrap angle inclusive of the ranges as claimed, using the ranges discloses for angles C, D, and F, where the wrap angle is defined as the  $180^\circ - (C + D + F)$  (Figure 2, Column 4, line 51-Column 5, line 5). In the case where the claimed ranges "overlap or lie" inside ranges disclosed by prior art a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257 191 USPQ 90. See MPEP 2144.05.

In particular using the preferred lower limit of angles C, D, and F results in a wrap angle of  $149^\circ$  ( $C = 15^\circ$ ,  $D = 1^\circ$  and  $F = 15^\circ$ ) (Figure 2, Column 4, line 51-Column 5, line 5). In particular the case where the wrap angle is disclosed as  $149^\circ$ , a *prima facie* case

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of obviousness exists where the claimed ranges and prior art do not overlap but are close enough that one in ordinary skill in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 f.2d 775, 227 USPQ 773 (Fed. Cir. 1985). See MPEP 2144.05.

### ***Conclusion***

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent 5219620 by Potter et al, also discloses applying a foam to one surface of a substrate at the point defining a wrap angle (Figure).

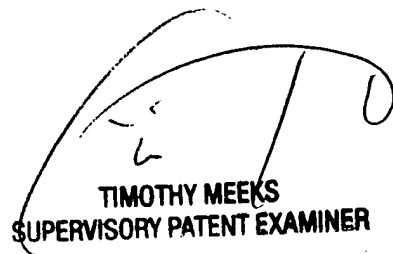
Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Turocy  
AU 1762

  
TIMOTHY MEEKS  
SUPERVISORY PATENT EXAMINER